

### **REMARKS**

Claims 1-18, 20, 22-24 and 26-32 are pending in this application. Claims 20 and 22-24 have been rejected. Claims 1-18 and 26-32 have previously been withdrawn. Claims 19, 21, 25 and 33 were previously cancelled.

Applicant presently cancels claims 20 and 22-24. Applicant further submits new claims 34-56 herewith. The Examiners remarks have been carefully studied and Applicant hereby files a Request for Continued Examination.

The new claims add no new matter and relate only to the elected species of TPEN and tumor invasion-metastasis, per the election in the letter dated November 26, 2007.

The current invention demonstrates new *in vitro* activities of TPEN, including *inter alia*, inhibition of cellular invasion in a dose-dependent fashion (paragraph 44, page 4 and Figs. 2a and 2b); dose-dependent inhibition of capillary formation (paragraph 45, page 4, Fig. 3). These activities were neither taught nor demonstrated by Fernandez-Pol et al. (US 6803379) or by Fernandy et al. (PTO-892 dated 11/02/2007, item U).

Most chelators bind in a non-specific fashion to metal ions. High concentrations thereof lead to the binding of essential cellular metal ions, and hence interfere with normal physiological cellular activities.

In sharp contrast, the present invention teaches that TPEN selectively binds zinc relative to other divalent metal ions. Addition of TPEN to cells enables both normal physiological cellular activities coupled with inhibition of tumor metastasis and/or tumor cellular invasion. It is these new inhibitory activities of TPEN compositions, coupled with

the lipid soluble properties of these compositions, which allow them to permeate cell membranes quickly, which allow for the compositions of the present invention to be useful in preventing the spread of cancer/metastasis.

Fenandez-Pol et al. (US 6803379) teach and claim the use of chelating agents in the treatment of viruses, prokaryotic and eukaryotic cells. '379 further states "*However, none of these chelators are specific for zinc, in fact, some of them are more specific for iron*" (paragraph 22 or column 4, line 66- column 5 line 10). Thus, '379 teaches away from using TPEN to preferentially bind zinc relative to other divalent metal ions.

However, the present invention teaches that TPEN does bind zinc preferentially to other divalent metal ions (table under paragraph [0048], page 5).

Fernandy et al. stated that the mechanism of action of TPEN was unknown (PTO-892 dated 11/02/2007, item U, page 500 lines 14-18). Fernandy et al. disclosed the use of TPEN in reducing ischaemia and reperfusion-induced injury.

It should be noted that in the response of November 26, 2007, the elected species chosen were A. TPEN and B. Tumor invasion metastasis. The term tumor invasion metastasis refers both to tumor invasion and tumor metastasis, which are two parts of the cancer spreading process and are functionally different phenomena. Tumor invasion is defined as "*the spread of malignant cells to new sites in the body; "the tumor's invasion of surrounding structures".* Tumor metastasis is defined as "*The process by which cancer spreads from the place at which it first arose as a primary tumor to distant locations in the body.*"

It has been shown in the present invention that TPEN prevents or inhibits both tumor invasion (Fig. 1) and tumor metastasis, by prevention of capillary formation (Fig. 2-3).

The current new claim set relates to one general inventive concept- compositions and methods comprising TPEN for preventing tumor metastasis/tumor invasion.

It is therefore respectfully submitted that the current new claims are both novel and non-obvious in light of '379 and Fernandy et al., alone or in combination.

Claims 20 and 22-24 are canceled without prejudice.

Support for new claims 34-56 appears throughout the specification and claims as noted hereinabove. No new matter has been added.

The Applicant reserves the right to file, at a later date, additional divisional and/or continuation applications claiming priority from the present application, which are directed to the canceled claims and/or non-elected species. In view of the above, further and favorable consideration is respectfully requested.

***CONCLUSION***

In view of the foregoing, Applicants submit that the application is in condition for allowance. Early notice to that effect is earnestly solicited. The Examiner is requested to contact the undersigned attorney if it is believed that such contact will expedite the prosecution of the application.

In the event this paper is not timely filed, Applicants hereby petition for an appropriate extension of time.

Respectfully submitted,

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